

PATENT
Atty. Dkt. No. WEAT/0372

IN THE CLAIMS:

1. (Previously Presented) An earth removal apparatus, comprising:
a first body portion;
a second body portion at least partially receivable within the first body portion;
a profile formed on an outer surface of the second body portion; and
a cutting member releasably connectable with the profile, wherein the connection is releaseable along at least two axis and the profile is adapted to maintain the cutting member on the profile during operation.
2. (Original) The earth removal apparatus of claim 1, wherein the profile comprises at least two intersecting faces, wherein one of the faces provides a support against rotation of the cutting member.
3. (Original) The earth removal apparatus of claim 1, wherein the profile substantially prevents movement of the cutting member in the profile.
4. (Original) The earth removal apparatus of claim 1, wherein the cutting member comprises a first end and a second end, wherein the second end is selectively detachable from the profile.
5. (Original) The earth removal apparatus of claim 4, wherein the second end is attached to the second body portion.
6. (Currently Amended) An earth removal apparatus, comprising:
~~a drillable body portion having one or more passages therethrough;~~
~~at least one profile formed on an outer surface of the drillable body portion, the at least one profile including at least two intersecting faces, wherein one of the faces includes a projection formed on a portion thereof thereon; and~~
~~a blade matingly engageable releasably connectable with the at least one profile,~~
wherein the connection is releasable along at least two axis.

Page 2

381962_1

PATENT
Atty. Dkt. No. WEAT/0372

7. (Original) The earth removal apparatus of claim 6, further comprising a sleeve disposed around a portion of the drillable body portion.
8. (Previously Presented) The earth removal apparatus of claim 7, wherein the at least one profile extends into an outer surface of the sleeve, the blade additionally received in the at least one profile in the sleeve.
9. (Original) The earth removal apparatus of claim 6, wherein the projection is rectangular in cross section, and the blade includes a slot therein for receiving the projection.
10. (Original) The earth removal apparatus of claim 6, wherein the at least one profile is machined into the drillable body portion.
11. (Original) The earth removal apparatus of claim 6, wherein the blade is bonded to the at least one profile.
12. (Original) The earth removal apparatus of claim 6, further comprising a filler disposed between the blade and the at least one profile.
13. (Original) The earth removal apparatus of claim 6, wherein the at least one profile includes opposed linear sections thereof, the linear sections offset from one another by an included angle of less than 90 degrees.
14. (Original) The earth removal apparatus of claim 6, further including a preform disposed in the drillable body portion, the preform having the at least one profile therein.
15. (Cancelled)

PATENT
Atty. Dkt. No. WEAT/0372

16. (Currently Amended) The earth removal apparatus of claim 6, further including a passage closure member for closing one or more passages in the drillable body portion.

17. (Original) The earth removal apparatus of claim 6, wherein the profile comprises a notch.

18. (Original) The earth removal apparatus of claim 6, further comprising a sleeve.

19. (Original) The earth removal apparatus of claim 18, wherein the drillable body portion comprises aluminum.

20. (Original) A drill bit, comprising:

a first body portion;

a drillable second body portion;

at least one profile formed integral with at least one of the first body portion and the drillable second body portion, the at least one profile having at least two opposed segments having a discernable orientation;

a cutting member received in the at least one profile and having the discernable orientation; and

the discernable orientation including an included angle between the opposed segments of less than ninety degrees.

21. (Original) The drill bit of claim 20, wherein:

the cutting member includes a segmented profile having a slot therein;

the at least one profile having a projection engageable with the slot; and

wherein the cutting member is positioned in the at least one profile such that the projection is received in the slot.

22. (Original) The drill bit of claim 20, wherein the at least one profile extends within the drillable second body portion and the first body portion.

PATENT
Atty. Dkt. No. WEAT/0372

23. (Original) The drill bit of claim 20, wherein the at least one profile is machined into the drillable second body portion.

24. (Original) The drill bit of claim 20, wherein the first body portion comprises a sleeve.

25. (Original) A method of drilling with casing, wherein a drillable drill bit is provided, comprising:

providing a drill bit support at a lower end of the casing;
locating a drillable body portion within the drill bit support;
providing a blade receiving member, integral with at least one of the drill bit support and the body portion, the receiving member including a profile;
positioning a blade having a mating profile on the receiving member; and
using the drill bit to form a wellbore, wherein the profile is adapted to substantially maintain the blade on the blade receiving member during drilling.

26. (Original) The method of claim 25, further including configuring the blade with at least a first and a second opposed portion, the first and second portions being positioned, relative to one another, by an included angle of less than ninety degrees.

27. (Original) The method of claim 26, wherein providing the blade receiving member comprises machining a preform to provide the profile thereon.

28. (Original) The method of claim 26, wherein providing the blade receiving member comprises disposing a preform on at least one of the drill bit support and the body portion to provide the profile thereon.

29. (Original) The method of claim 26, further comprising moving at least a portion of the drillable body portion out of the drill bit support.

PATENT
Atty. Dkt. No. WEAT/0972

30. (Original) The method of claim 29, further comprising bending the first portion relative to the second to increase the included angle to greater than ninety degrees.

31. (Original) A method of completing a wellbore, comprising:
providing an earth removal apparatus at a lower of a drill string, the earth removal apparatus having:
first body portion; and
a drillable portion disposed in the first body portion, the drillable portion including a bore;
forming the wellbore;
blocking the bore from fluid communication;
moving the drillable portion relative the first sleeve portion; and
re-establishing fluid communication between an inner portion of the earth removal apparatus and the wellbore.

32. (Original) The method of claim 31, wherein blocking the bore comprises landing a ball in a ball seat disposed in the bore.

33. (Original) The method of claim 32, wherein establishing communication comprises pumping the ball through the ball seat.

34. (Original) The method of claim 31, further comprising preventing a fluid in the wellbore from entering the drill string.

35. (Original) The method of claim 31, further comprising forming a receiving profile on a bottom surface of the drillable portion.

36. (Original) The method of claim 35, further comprising providing a blade with a mating profile formed thereon by engaging receiving profile with the mating profile.

PATENT
Atty. Dkt. No. WEAT/0372

37. (Original) The method of claim 36, wherein the receiving profile includes a projection formed thereon.

38. (Previously Presented) A downhole valve, comprising:

a first body portion;

a bore disposed through the first body portion; and

an obstruction member retainer at least partially disposed in the bore, the obstruction member retainer including a first seating surface and a second seating surface adapted to cooperate with an obstruction member that is movable from engagement with the first seating surface into engagement with the second seating surface, wherein the obstruction member retainer and the obstruction member interact to provide selective fluid communication through the bore.

39. (Cancelled)

40. (Previously Presented) The downhole valve of claim 38, further comprising a biasing member disposed inside the bore and below the obstruction member retainer.

41. (Cancelled)

42. (Cancelled)

43. (Previously Presented) The downhole valve of claim 38, wherein the obstruction member is urged into engagement with the second seating surface by the biasing member.

44. (Previously Presented) The downhole valve of claim 38, wherein the body portion comprises aluminum.

45. (Original) The downhole valve of claim 38, wherein the obstruction member retainer comprises a flexible material.

PATENT
Atty. Dkt. No. WEAT/0372

46. (Previously Presented) A downhole valve, comprising:

an obstruction member having a first position engagable with a first seating surface in an obstruction member retainer and a second position engagable with a second seating surface in the obstruction member retainer; and

a biasing member biasing the obstruction member to the second position.

47. (Previously Presented) The downhole valve of claim 46, wherein the obstruction member is passable through the obstruction member retainer to the second position.